

CLAIMS:

5 1. Nucleic acid, in essentially isolated form, said nucleic acid encoding one of the amino acid sequences of SEQ ID NO: 2, SEQ ID NO: 4, SEQ ID NO: 6, SEQ ID NO: 8 and/or SEQ ID NO: 10, or an analog, variant, allele, ortholog, part and/or fragment of one of the amino acid sequences of SEQ ID NO: 2, SEQ ID NO: 4, SEQ ID NO: 6, SEQ ID NO: 8 and/or SEQ ID NO: 10.

10 2. Nucleic acid, in essentially isolated form, said nucleic acid comprising one of the nucleotide sequences of SEQ ID NO: 1, SEQ ID NO: 3, SEQ ID NO: 5, SEQ ID NO: 7 and/or SEQ ID NO: 9, or a mutant, variant, allele, analog, ortholog, part and/or fragment thereof.

15 3. Genetic construct, comprising the nucleic acid of claim 1 and/or of claim 2, and optionally one or more further elements of genetic constructs known per se.

20 4. Host cell or host organism, transformed with and/or containing a nucleic acid according to claim 1 and/or claim 2 and/or a genetic construct according to claim 3.

25 5. Host cell or host organism, (capable of) expressing and/or producing one of the amino acid sequences of SEQ ID NO: 2, SEQ ID NO: 4, SEQ ID NO: 6, SEQ ID NO: 8 and/or SEQ ID NO: 10 or an analog, variant, allele, analog, ortholog, part and/or fragment thereof.

30 6. Method for producing one of the amino acid sequences of SEQ ID NO: 2, SEQ ID NO: 4, SEQ ID NO: 6, SEQ ID NO: 8 and/or SEQ ID NO: 10, or an analog, variant, allele, ortholog, part and/or fragment thereof, said method comprising at least the steps of:

a) expressing of a nucleic acid according to claim 1 and/or 2 in a suitable host cell or host organism; and optionally

b) isolating the amino acid sequence thus expressed.

7. Method for producing one of the amino acid sequences of SEQ ID NO: 2, SEQ ID NO: 4, SEQ ID NO: 6, SEQ ID NO: 8 and/or SEQ ID NO: 10, or an analog, 5 variant, allele, ortholog, part and/or fragment thereof, said method comprising at least the steps of:

a) maintaining and/or cultivating a host cell or host organism according to claim 4 or 5 under conditions such that said host cell or host organism expresses or produces one 10 of the amino acid sequences of SEQ ID NO: 2, SEQ ID NO: 4, SEQ ID NO: 6, SEQ ID NO: 8 and/or SEQ ID NO: 10, or an analog, variant, allele, ortholog, part and/or fragment thereof; and optionally

b) isolating the amino acid sequence thus expressed/produced.

8. Protein or polypeptide, in essentially isolated form, said protein or polypeptide 15 comprising one of the amino acid sequences of SEQ ID NO: 2, SEQ ID NO: 4, SEQ ID NO: 6, SEQ ID NO: 8 and/or SEQ ID NO: 10, or an analog, variant, allele, ortholog, part and/or fragment thereof.

9. Method for generating a signal that is representative for the interaction of a 20 protein or polypeptide of claim 8 with a test chemical, said method at least comprising the steps of:

a) contacting a protein or polypeptide of claim 8, or a host cell or host organism of claim 4 or 5, with said test chemical, in such a way that a signal may be generated that is 25 representative for the interaction between said test chemical and said protein or polypeptide; and optionally

b) detecting the signal that may thus be generated.

10. Method for identifying a modulator of a protein or polypeptide of claim 8, for 30 example from a set or library of test chemicals, said method at least comprising the steps of:

- a) contacting a protein or polypeptide of claim 8, or a host cell or host organism of claim 4 or 5, with said test chemical, in such a way that a signal may be generated that is representative for the interaction between said test chemical and said protein or polypeptide; and optionally
- 5 b) detecting the signal that may thus be generated, said signal identifying a modulator of said amino acid sequence.

11. Modulator of a protein or polypeptide according to claim 8, identified and/or developed using a nucleic acid according to claim 1 and/or 2, a host cell according to
10 claim 4 and/or 5, a protein or polypeptide according to claim 8, and/or a method according to claim 9 and/or 10.

12. Modulator according to claim 11, being an inhibitor of a protein or polypeptide of claim 8.

15 13. Pharmaceutical composition, comprising at least one modulator according to claim 11 and/or 12 and at least one pharmaceutically acceptable carrier.

14. Pharmaceutical composition according to claim 13, being a composition
20 suitable and/or intended for oral administration.

15. Use of a modulator according to claim 11 and/or 12 in the preparation of a pharmaceutical composition.

25 16. Use of a modulator according to claim 11 and/or 12 in the preparation of a pharmaceutical composition for the prevention and/or treatment of metabolic diseases.

17. Antibody against a protein or polypeptide according to claim 8.